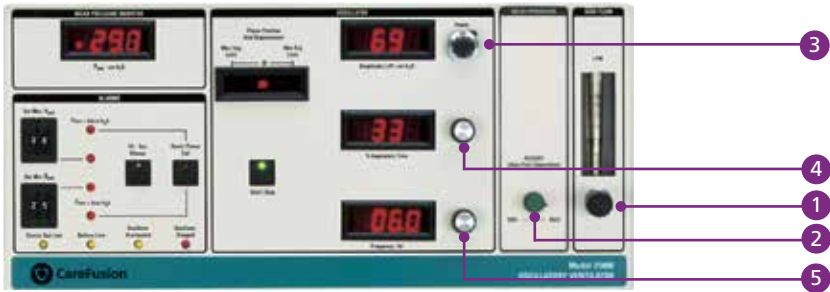


# 3100B HFOV quick reference card



## Controls at a glance

### 1. Bias Flow: Set this control first

- A typical range for adults is 25 to 40 liters per minute (LPM)
- Adjusting bias flow will affect mean airway pressure
- Lowering bias flow may decrease work of breathing and facilitate weaning

### 2. Adjust: Sets the mean airway pressure

- This control directly affects gas exchange
- Initial setting is slightly higher than conventional ventilation

### 3. Power: Controls piston displacement (tidal volume)

- Initial setting is based on chest wall movement
- Movement should be visible from chest to upper thigh
- Adjust to achieve optimal arterial carbon dioxide ( $\text{PaCO}_2$ )

### 4. % Inspiratory Time: 33% for most applications

- For some patients, increasing % inspiratory time to 50% may improve ventilation and increase lung recruitment
- Once set, this control is not typically changed

### 5. Frequency: Breath rate is expressed in hertz (Hz)

- One Hz equals 60 breaths per minute
- An initial setting of 5 to 6 Hz is typical
- An increase in frequency = decreased tidal volume or minute volume
- A decrease in frequency = increased tidal volume or minute volume

# Weaning guidelines

## While on HFOV:

- Wean fraction of inspired oxygen (FiO<sub>2</sub>) as tolerated to target FiO<sub>2</sub>
- Once FiO<sub>2</sub> is ≤ 40%, begin to wean mean airway pressure by increments of 1 to 2 centimeters of water (cmH<sub>2</sub>O)
- Assess for adequate lung inflation and partial pressure of oxygen (PaO<sub>2</sub>)

**In air leak syndrome:** Mean airway pressures are similar to those used in conventional ventilation; higher FiO<sub>2</sub>s are typically used

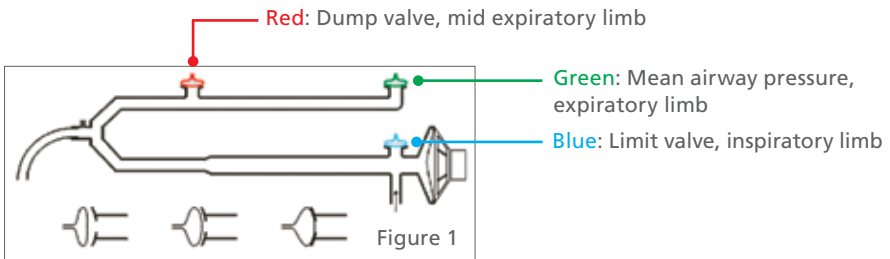
**Transition to conventional ventilation** when each of the following parameters are met:

- Mean airway pressure is stable and appropriate for the pathology
- Patient tolerates position changes and procedures well
- Gas exchange and lung volumes are acceptable and stable

When returning a patient to conventional ventilation, mean airway pressure values should remain similar to those employed in HFOV. Weaning from conventional ventilation should follow individual institutional practice.

These are general guidelines only and assume the clinician has read and understands the 3100B operator's manual. The physician must determine the appropriateness of these guidelines as they apply to specific patients.

## Valve assembly locations



## Mean airway pressure

Mean airway pressure is regulated by controlling the inflation of the balloon valve in the expiratory limb of the circuit (*Figure 1*). As inflation pressure inside the balloon increases, the outflow of gas is restricted, providing mean airway pressure.

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